HENRY'S POINT ASSOCIATION (PWSNO 1280226)
SOURCE WATER ASSESSMENT REPORT

April 24, 2001

State of Idaho
Department of Environmental Quality

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SOURCE WATER ASSESSMENT FOR HENRY'S POINT ASSOCIATION

Under the Federal Safe Drinking Water Act Amendments of 1996, all states are required by the U.S. Environmental Protection Agency (EPA) to assess every source of public drinking water for its relative sensitivity to contaminants regulated by the Act. The Idaho Department of Environmental Quality is completing the assessments for all Idaho public drinking water systems. The assessment for your particular drinking water source is based on a land use inventory within a 1,000 foot radius of your well, your water quality history, construction characteristics associated with your well or wells, and site specific sensitivity factors associated with the aquifer your water is drawn from.

This report, *Source Water Assessment for Henry's Point Association* describes the public drinking water source, potential contaminant sites located within a 1000-foot boundary around the drinking water source, and the susceptibility (risk) that may be associated with any associated potential contaminants. This assessment, taken into account with local knowledge and concerns, should be used as a planning tool to develop and implement appropriate protection measures for this system. **The results should not be used as an absolute measure of risk and are not intended to undermine the confidence in your water system.**

Potential Contaminant Inventory. Henry's Point Association, located on the eastern side of Hayden Lake gets drinking water from a 120 foot deep well. No treatment of the water prior to distribution is currently required. Potential contaminant sources inside the 1000-foot boundary around the well include surface waters, public and private roads, and septic tanks.

The well is about 275 feet from Hayden Lake, and needs to be evaluated to determine whether it is groundwater under direct influence of surface water The Public Water System file for Henry's Point Association shows17 septic tanks serving homes in the area included in Henry's Point Association. The map on page 5 of this report shows the 1000-foot boundary around the well, but does not show the exact location of houses relative to the well. Table 1 summarizes information about potential contaminants of concern that lie inside the 1000-foot zone around the well.

Table 1. Henry's Point Association Potential Contaminant Inventory

Map ID	Source Description	Potential Contaminants	Source of Information
1	Roads	IOC, SOC, VOC,	USGS Map
2	Septic Tanks	IOC, Microbial	PWS File
3	Surface Water	Microbial	USGS Map

IOC = inorganic chemical, VOC = volatile organic chemical, SOC = synthetic organic chemical
USGS= United States Geological Survey, PWS = Public Water System

Water Quality History. Henry's Point Association is required to monitor quarterly for bacterial contamination and yearly for nitrates. The water tested positive for total Coliform bacteria in July 2000, May and June 1998, and June and August 1995. Since 1993 nitrate concentrations have ranged from undetectable levels to 1.40 mg/l. The Maximum Contaminant Level for Nitrate is 10 mg/l.

Well Construction. The Henry's Point Association well was drilled to a depth of 120 feet in 1972. The casing extends 42 feet below ground surface, terminating in a hard black and white granite stratum according to the well log. The puddling clay surface seal is 41 feet deep. Current Idaho Department of Water Resources standards for well construction require the wall thickness of a six inch casing to be a minimum of 0.28 inches. The wall thickness of the Henry's Point Association well casing is 0.25 inches.

The static water level in the well is 62 feet below ground. The well is outside of the flood plain for the lake, and is protected from surface water run off. The casing extends 18 inches above ground surface.

Well Site Characteristics. Soils in the 1000-foot zone around the well are generally poorly to moderately well drained, providing some protection against migration of contaminants to the well. The first water bearing stratum was encountered at 68 to 79 feet below the surface. There is no protective layer of sedimentary soils above the water table. Soils above first ground water are composed of sand, decomposed and hard granite.

Susceptibility to Contamination. A susceptibility analysis DEQ conducted on the Henry's Point Association well, incorporating information from the public water system file, and from the well log, ranked the well moderately susceptible to all classes of regulated contaminants. The susceptibility analysis worksheet for your well on page 6 of this report shows how your well was scored. Formulas used to compute the final susceptibility scores are shown on the bottom of the worksheet.

Source Water Protection. This assessment should be used as a basis for determining appropriate new protection measures or re-evaluating existing protection efforts. No matter what ranking a source receives, protection is always important. Whether the source is currently located in a “pristine” area or an area with numerous industrial and/or agricultural land uses, the way to ensure good water quality in the future is to act now to protect valuable water supply resources.

For Henry's Point Association source water protection activities should focus on bringing the system into full compliance with Idaho Rules for Public Drinking Water Systems as recommended in the April 12, 2000 Sanitary Survey. It is particularly important to fill the pit near the well and to have a drained concrete floor in the pump house.

Tests to determine whether the well is directly influenced by ground water (GWUDI) should be performed. The system should educate its users about the importance of proper septic system maintenance as a way to prevent ground water contamination. The association may want to institute an annual household hazardous materials collection day. Another activity to consider is a periodic inventory of the area delineated around your well to document land use changes, new businesses, roads, houses, and septic systems. Because the Association doesn't have direct jurisdiction over the entire 1000-foot protection zone around its wells, it will be important to form partnerships with neighbors, and public agencies to regulate land uses that can degrade ground water quality.

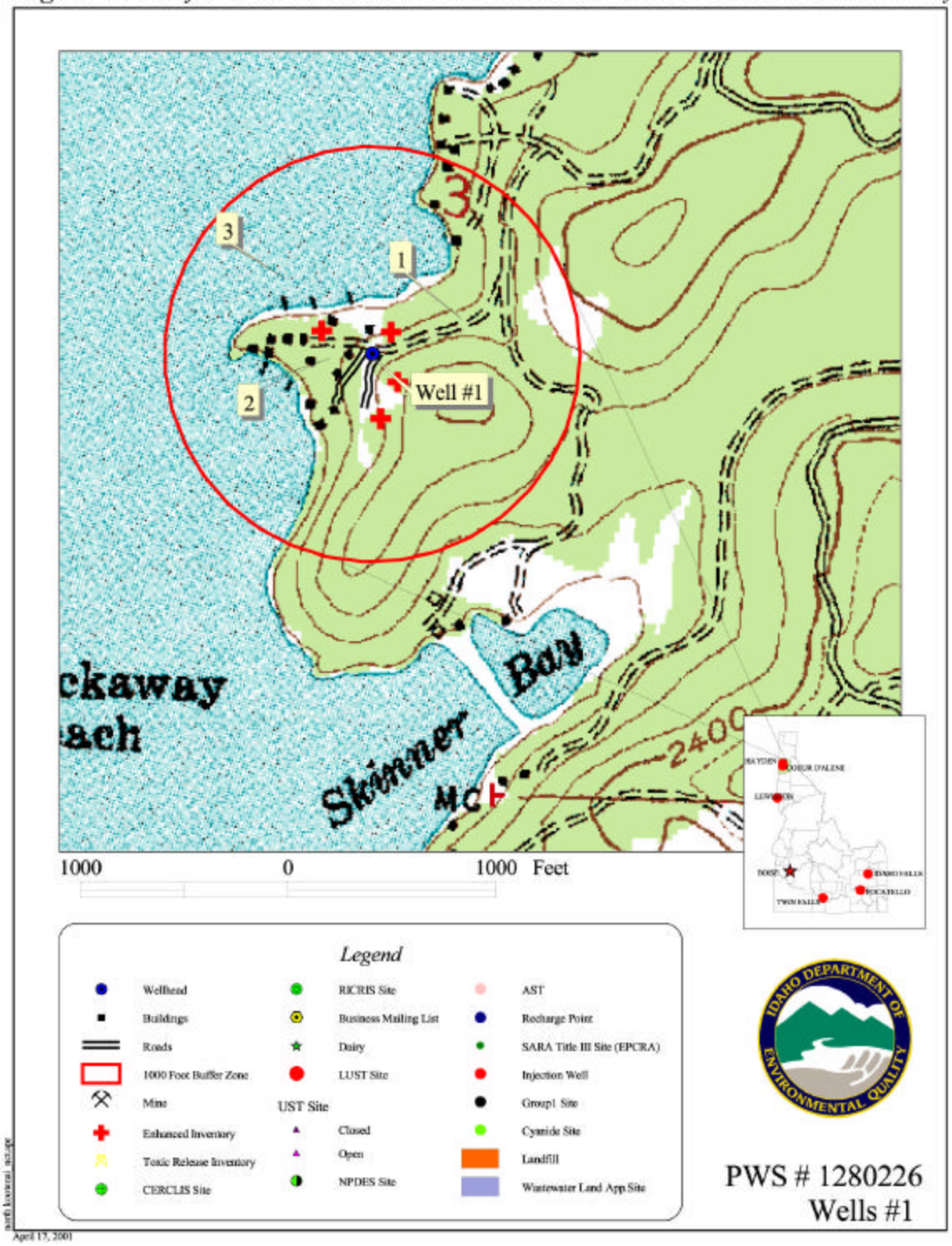
The goal of source water protection is to maintain current water quality for the future despite the changes we can expect with population growth in North Idaho.

For assistance in developing source water protection strategies please contact Tony Davis at the Coeur d'Alene Regional DEQ office at 208 769-1422.

DEQ website:

http://www.deq.state.id.us

Figure 1. Henry's Point Association Delineation and Potential Contaminant Inventory.



Ground Water Susceptibility Analysis

Public Water System Name : **HENRYS POINT ASSN** Well# : **WELL #1**

Public Water System Number : **1280226** 4/2/01 9:56:45 AM

1. System Construction		SCORE			
Drill Date	9/11/72				
Driller Log Available	YES				
Sanitary Survey (if yes, indicate date of last survey)	YES	2000			
Well meets IDWR construction standards	NO	1			
Wellhead and surface seal maintained	YES	0			
Casing and annular seal extend to low permeability unit	YES	0			
Highest production 100 feet below static water level	NO	1			
Well located outside the 100 year flood plain	YES	0			
Total System Construction Score		**2**			
2. Hydrologic Sensitivity					
Soils are poorly to moderately drained	YES	0			
Vadose zone composed of gravel, fractured rock or unknown	NO	0			
Depth to first water > 300 feet	NO	1			
Aquitard present with > 50 feet cumulative thickness	NO	2			
Total Hydrologic Score		**3**			
3. Potential Contaminant / Land Use - ZONE 1A		IOC Score	VOC Score	SOC Score	Microbial Score
Land Use Zone 1A	RANGELAND, WOODLAND,	0	0	0	0
Farm chemical use high	NO	0	0	0	
IOC, VOC, SOC, or Microbial sources in Zone 1A	NO	NO	NO	NO	NO
Total Potential Contaminant Source/Land Use Score - Zone 1A		**0**	**0**	**0**	**0**
Potential Contaminant / Land Use - ZONE 1B					
Contaminant sources present (Number of Sources)	YES	2	1	1	2
(Score = # Sources X 2) 8 Points Maximum		4	2	2	4
Sources of Class II or III leacheable contaminants or Microbials	YES	2	1	1	
4 Points Maximum		2	1	1	
Zone 1B contains or intercepts a Group 1 Area	NO	0	0	0	0
Land use Zone 1B	Less Than 25% Agricultural Land	0	0	0	0
Total Potential Contaminant Source / Land Use Score - Zone 1B		**6**	**3**	**3**	**4**
Cumulative Potential Contaminant / Land Use Score		**6**	**3**	**3**	**4**
4. Final Susceptibility Source Score		**7**	**6**	**6**	**7**
5. Final Well Ranking		Moderate	Moderate	Moderate	Moderate

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The final scores for the susceptibility analysis were determined using the following formulas:

1) VOC/SOC/IOC Final Score = Hydrologic Sensitivity + System Construction + (Potential Contaminant/Land Use x 0.27)

2) Microbial Final Score = Hydrologic Sensitivity + System Construction + (Potential Contaminant/Land Use x 0.35)

Final Susceptibility Ranking:

0 - 5 Low Susceptibility

6 - 12 Moderate Susceptibility

> 13 High Susceptibility

POTENTIAL CONTAMINANT INVENTORY
LIST OF ACRONYMS AND DEFINITIONS

AST (Aboveground Storage Tanks) – Sites with aboveground storage tanks.

Business Mailing List – This list contains potential contaminant sites identified through a yellow pages database search of standard industry codes (SIC).

CERCLIS – This includes sites considered for listing under the **Comprehensive Environmental Response Compensation and Liability Act (CERCLA)**. CERCLA, more commonly known as ASuperfund@ is designed to clean up hazardous waste sites that are on the national priority list (NPL).

Cyanide Site – DEQ permitted and known historical sites/facilities using cyanide.

Dairy – Sites included in the primary contaminant source inventory represent those facilities regulated by Idaho State Department of Agriculture (ISDA) and may range from a few head to several thousand head of milking cows.

Deep Injection Well – Injection wells regulated under the Idaho Department of Water Resources generally for the disposal of stormwater runoff or agricultural field drainage.

Enhanced Inventory – Enhanced inventory locations are potential contaminant source sites added by the water system. These can include new sites not captured during the primary contaminant inventory, or corrected locations for sites not properly located during the primary contaminant inventory. Enhanced inventory sites can also include miscellaneous sites added by the Idaho Department of Environmental Quality (DEQ) during the primary contaminant inventory.

Floodplain – This is a coverage of the 100year floodplains.

Group 1 Sites – These are sites that show elevated levels of contaminants and are not within the priority one areas.

Inorganic Priority Area – Priority one areas where greater than 25% of the wells/springs show constituents higher than primary standards or other health standards.

Landfill – Areas of open and closed municipal and non-municipal landfills.

LUST (Leaking Underground Storage Tank) – Potential contaminant source sites associated with leaking underground storage tanks as regulated under RCRA.

Mines and Quarries – Mines and quarries permitted through the Idaho Department of Lands.)

Nitrate Priority Area – Area where greater than 25% of wells/springs show nitrate values above 5mg/l.

NPDES (National Pollutant Discharge Elimination System) – Sites with NPDES permits. The Clean Water Act requires that any discharge of a pollutant to waters of the United States from a point source must be authorized by an NPDES permit.

Organic Priority Areas – These are any areas where greater than 25 % of wells/springs show levels greater than 1% of the primary standard or other health standards.

Recharge Point – This includes active, proposed, and possible recharge sites on the Snake River Plain.

RICRIS – Site regulated under **Resource Conservation Recovery Act (RCRA)**. RCRA is commonly associated with the cradle to grave management approach for generation, storage, and disposal of hazardous wastes.

SARA Tier II (Superfund Amendments and Reauthorization Act Tier II Facilities) – These sites store certain types and amounts of hazardous materials and must be identified under the Community Right to Know Act.

Toxic Release Inventory (TRI) – The toxic release inventory list was developed as part of the Emergency Planning and Community Right to Know (Community Right to Know) Act passed in 1986. The Community Right to Know Act requires the reporting of any release of a chemical found on the TRI list.

UST (Underground Storage Tank) – Potential contaminant source sites associated with underground storage tanks regulated as regulated under RCRA.

Wastewater Land Applications Sites – These are areas where the land application of municipal or industrial wastewater is permitted by DEQ.

Wellheads – These are drinking water well locations regulated under the Safe Drinking Water Act. They are not treated as potential contaminant sources.

NOTE: Many of the potential contaminant sources were located using a geocoding program where mailing addresses are used to locate a facility. Field verification of potential contaminant sources is an important element of an enhanced inventory.

Where possible, a list of potential contaminant sites unable to be located with geocoding will be provided to water systems to determine if the potential contaminant sources are located within the source water assessment area.